REDISCOVERY OF *MIRABILIS HINTONIORUM* (NYCTAGINACEAE), A STRIKING FOUR-O'CLOCK ENDEMIC TO THE SIERRA DE COALCOMÁN, MICHOACÁN, MEXICO

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ABSTRACT

Recent collecting in the Sierra de Coalcomán, Michoacán, Mexico, resulted in the rediscovery of *Mirabilis hintoniorum*, a species that had not been recollected since its first gathering in 1939. The rediscovery is notable because of the striking flowers of the species, which are unusual in the genus by virtue of their nearly limbless, tubular form and "firecracker" red and yellow colors. The species is undoubtedly rare and likely endemic to the Sierra de Coalcomán.

RESUMEN

En una salida a la Sierra de Coalcomán, Michoacán, México resultó el redescubrimiento de *Mirablis hintoniorum*, una especie que no había sido encontrada desde la primera colecta hecha en 1939. El redescubrimiento es notable dado que es una especie muy atractiva por sus flores, las cuales son tubulares, con lóbulos reducidos y con una mezcla de amarillo y rojo. La especie es muy rara y endémica de la Sierra de Coalcomán.

From 1931 to 1941, famed plant collector George B. Hinton (1882–1943) conducted extensive botanical exploration, primarily in the southern Mexican states of Guerrero, México, and Michoacán. During this time he made over 16,000 collections, and his specimens have served as the types of more than 360 species (Hinton & Rzedowski 1975). On July 11, 1939 Hinton secured specimens in the Sierra de Coalcomán, in southwest Michoacán, of what is undoubtedly the most striking of all species of four-o'clocks (*Mirabilis* L.). Despite the distinctiveness and showiness of the species, and the several duplicate specimens that were distributed to major herbaria, the species remained "undiscovered" by taxonomists until Le Duc (1992) described *Mirabilis hintoniorum* Le Duc over 50 years later. In the course of monographic work on *Mirabilis* section *Mirabilis*, Le Duc came across four duplicates of Hinton's collection, housed in herbaria at the University of Texas (TEX), Conservatory and Botanical Garden of Geneva (G), Missouri Botanical Garden (MO), and University of California, Berkeley (UC). When she published her monograph in 1995, Le Duc had not encountered additional collections of *M. hintoniorum* (Le Duc 1995). In this note, we provide a fuller description and photographs of this remarkable species that had apparently not been recollected until we, too, encountered plants in the Sierra de Coalcomán.

Although unremarkable in vegetative morphology, *M. hintoniorum* is unrivaled among the nearly 60 species in the genus by virtue of the form and color of the flowers. Le Duc distinguished *M. hintoniorum* from similar species on the basis of glabrous, few-flowered inflorescences and the exceedingly shallow lobes and orange color of the perianth. However, her observations, based only upon examination of few herbarium specimens and Hinton's economical observations on the specimen labels, are not entirely accurate and fail to convey the spectacular impression of the living plants. In particular, the inflorescences are hardly few-flowered and the perianth scarcely orange.

On June 28, 2003 we collected *Mirabilis hintoniorum* for apparently the first time since Hinton encountered the species 64 years earlier. Had we been familiar with Hinton's collection or Le Duc's description of the species, we would have been wholly unprepared for the appearance of this seeming botanical fireworks display (Figs. 1–3). The flowers, described by Hinton as simply "orange", are in actuality pendent flames—

Fig. 1. *Mirabilis hintoniorum* Le Duc photographed in the Sierra de Coalcomán, Michoacán, México. 1. habit.

the perianth tube is bright red, grading into a vibrant yellow with red venation in the limb. However, these features are lost with drying, and the flowers on both Hinton's and our herbarium collections are nearly colorless. In contrast to the "few-flowered" inflorescences (Le Duc 1992, 1995) of Hinton's specimens, those on the plants that we encountered comprise a many-flowered, pyrotechnic cascade. To Le Duc's otherwise accurate description we can add that the plants are erect, bushy, perennial herbs reaching 1 m in height with red stems. In addition to the aforementioned characteristics of the flowers, the stigmas are pink and the anthers red.

Like Hinton, we encountered *M. hintoniorum* only in the Sierra de Coalcomán. Whereas the type locality of Villa Victoria is along the Pacific Slope, our initial encounter took place approximately 55 kilometers (airline) away, at the opposite (northeastern) end of the range within the Balsas Depression. We were brought to an abrupt stop by the sight of *M. hintoniorum* while traveling along the unpaved road from Aguililla at the foot of the mountains to the high-mountain logging town of Dos Aguas. As we approached the unknown marvel, we were dumbstruck with the realization that we were gazing at a *Mirabilis* dramatically unlike any that either of us had ever seen, the myriad cultivars of *M. jalapa* L. not excepted. Only a small patch of these robust plants was found at this site, which we documented with several specimens (*Fishbein and Steinmann 5113*). Later the same day, we observed another small patch on the southwestern side of the range, between Dos Aguas and Coalcomán along the road to Villa Victoria, from which no collections were made. We did not observe the species anywhere else.

It is paradoxical that *M. hintoniorum*, arguably the showiest species in the genus, should have remained so obscure, notwithstanding being a narrow endemic to the Sierra de Coalcomán. Two populations were

FIGS. 2–3. *Mirabilis hintoniorum* Le Duc photographed in the Sierra de Coalcomán, Michoacán, México. 2 (top). flowering stems. 3 (bottom). close up of flowers.

found along a moderately traveled, albeit rugged, road that has been traversed periodically by plant collectors, including Rogers McVaugh. In fact, we made our collection at the type locality of *Ipomoea fissifolia* (McPherson) Eckenw. It seems likely that the species is indeed endemic to the Sierra de Coalcomán and it is quite likely rare. Furthermore, it possibly has a very brief flowering span in the early part of the rainy season, and these factors may help to explain not only the few encounters by plant collectors but also the absence of the "firecracker four-o'clock" from our gardens.

Exsiccatae. **MÉXICO. Michoacán.** Distr. Coalcomán: Villa Victoria, alt. 700 m, dense woods, 11 Jul 1939, *G.B. Hinton et al. 13909* (HOLOTYPE: TEX; ISOTYPES: G, MO, photo!, UC); Mpio. Aguililla, along Aguililla-Dos Aguas road, 18.2 km (road) WSW of La Paz at jct Apatzingán-Aguililla road, 18°46.0'N 102°50.90'W, elev. 1500 m, roadcut, heavily disturbed upper tropical deciduous forest just below transition to oaks, with *Guazuma, Heliocarpus, Pouzolzia, Oxalis, Gonolobus grandiflorus, Opuntia, Cordia*, 28 Jun 2003, *M. Fishbein & V.W. Steinmann 5113* (ARIZ!, F!, HPSU!, IEB!, MEXU!, MISSA!, MO!).

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